

App. No. 10/707,104
Amendment dated March 15, 2006
Reply to Office action of December 15, 2005

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the present application.

Listing of Claims:

Claim 1 (currently amended): A cooling fan motor comprising:

a rotor ~~that~~ includinges a magnet and defining a rotational axis;

an impeller blade unit ~~that is~~ coaxially fixed to the rotor and configured to generate a spiral airflow defining an airflow vector inclined at a predetermined angle to the rotational axis;

a stator ~~that is fixed to so as to~~ disposed facing the rotor magnet;

a frame constituting an outer frame of the fan motor, that for retainings the stator ~~and forms an outer frame of the fan motor;~~ and

a guard plate ~~that coverings an outer surface of the frame and is either fixed to or formed integrally with the frame, wherein the guard plate is provided with including intersecting a mesh grid formed by ribs extending in at least two directions, the intersections of the ribs are being fixed to each other and therein forming a mesh grid, and each of the ribs, in cross section orthogonal to the rib lengthwise, has having at least one side inclined at substantially the same angle as said airflow vector side of a cross section that is perpendicular to the direction in which the rib extends, the inclined side is substantially parallel to the direction of an airflow spirally that is generated at the position of the rib due to the rotation of the impeller blade unit of the fan motor or is inclined in the direction substantially along the airflow.~~

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Claim 2 (original): The cooling fan motor according to claim 1, wherein each cell of the mesh grid formed by ribs extending in at least two directions of the guard plate of the fan motor is small enough so that at least a human finger cannot enter.

Claim 3 (previously presented): The cooling fan motor according to claim 1, wherein the guard plate is formed by a plurality of rib groups extending linearly in two directions that are substantially perpendicular to each other.

Claim 4 (original): The cooling fan motor according to claim 1, wherein the guard plate is formed by a plurality of rib groups that are arranged substantially like concentric circles having a center point according to a rotation axis of the fan motor and a plurality of ribs that are substantially perpendicular to the concentric circles and extend radially from the rotation axis.

Claim 5 (currently amended): The cooling fan motor according to claim 1, wherein ~~a shape of the cross section~~ each of the guard plate ribs of the guard plate in cross section orthogonal to the rib lengthwise is a right triangle, ~~and the whose inclined side is at substantially the same angle as said airflow vector thereof is substantially parallel to the direction of an airflow spirally that is generated at the position of the rib due to the rotation of the fan motor or is inclined in the direction substantially along the airflow.~~

Claim 6 (currently amended): The cooling fan motor according to claim 1, wherein ~~a shape of the cross section~~ each of the guard plate ribs of the guard plate in cross section orthogonal to the rib lengthwise is a rectangle, ~~and whose two longer sides of the rectangle are both substantially parallel said airflow vector to the~~

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~~direction of an airflow spirally that is generated at the position of the rib due to the rotation of the fan motor or is inclined in the direction substantially along the airflow.~~

Claim 7 (currently amended): A case ~~of~~ for an electronic or electric device having a cooling fan motor that includes a rotor having a magnet, an impeller blade unit ~~that is~~ coaxially fixed to the rotor and configured to generate a spiral airflow defining an airflow vector inclined at a predetermined angle to the rotational axis, a stator that is fixed to at a location so as to disposed facing the rotor magnet, and that includes a frame constituting an outer frame of the fan motor, that for retaining the stator and forms an outer frame of the fan motor, the case comprising:

a guard plate ~~that coverings~~ the outer frame of the cooling fan motor and is either fixed to or formed integrally with the case, wherein the guard plate is provided with including intersecting a mesh grid ~~formed by~~ ribs extending in at least two directions, the intersections of the ribs are being fixed to each other and therein forming a mesh grid, and each of the ribs, in cross section orthogonal to the rib lengthwise, has having at least one side inclined at substantially the same angle as said airflow vector side of a cross section that is perpendicular to the direction in which the rib extends, the inclined side is substantially parallel to the direction of an airflow spirally that is generated at the position of the rib due to the rotation of the impeller blade unit of the fan motor or is inclined in the direction substantially along the airflow.

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Claim 8 (original): The cooling fan motor according to claim 7, wherein each cell of the mesh grid formed by ribs extending in at least two directions of the guard plate of the fan motor is small enough so that at least a human finger cannot enter.

Claim 9 (previously presented): The cooling fan motor according to claim 7, wherein the guard plate is formed by a plurality of rib groups extending linearly in two directions that are substantially perpendicular to each other.

Claim 10 (original): The cooling fan motor according to claim 7, wherein the guard plate is formed by a plurality of rib groups that are arranged substantially like concentric circles having a center point according to a rotation axis of the fan motor and a plurality of ribs that are substantially perpendicular to the concentric circles and extend radially from the rotation axis.

Claim 11 (currently amended): The cooling fan motor according to claim 7, wherein ~~a shape of the cross section each of the guard plate ribs of the guard plate in cross section orthogonal to the rib lengthwise is a right triangle, and the whose inclined side is at substantially the same angle as said airflow vector thereof is substantially parallel to the direction of an airflow spirally that is generated at the position of the rib due to the rotation of the fan motor or is inclined in the direction substantially along the airflow~~

Claim 12 (currently amended): The cooling fan motor according to claim 7, wherein ~~a shape of the cross section each of the guard plate ribs of the guard plate in cross section orthogonal to the rib lengthwise is a rectangle, and whose two longer sides of the rectangle are both substantially parallel said airflow vector to the~~

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~~direction of an airflow spirally that is generated at the position of the rib due to the rotation of the fan motor or is inclined in the direction substantially along the airflow.~~

Claim 13 (currently amended): An electric device that includes a case and a cooling fan motor disposed at a predetermined position in the case, the cooling fan motor comprising a rotor that includes a magnet, an impeller blade unit ~~that is~~ coaxially fixed to the rotor and configured to generate a spiral airflow defining an airflow vector inclined at a predetermined angle to the rotational axis, a stator ~~that is~~ fixed to so as to disposed facing the rotor magnet, and that includes a frame constituting an outer frame of the fan motor, that for retainings the stator and forms an outer frame of the fan motor, the case comprising:

a guard plate ~~that coverings~~ the outer frame of the cooling fan motor and is either fixed to or formed integrally with the case, ~~wherein the guard plate is provided with including intersecting a mesh grid formed by ribs extending in at least two directions, the intersections of the ribs are being fixed to each other and therein forming a mesh grid, and each of the ribs, in cross section orthogonal to the rib lengthwise, has having at least one side inclined at substantially the same angle as said airflow vector side of a cross section that is perpendicular to the direction in which the rib extends, the inclined side is substantially parallel to the direction of an airflow spirally that is generated at the position of the rib due to the rotation of the impeller blade unit of the fan motor or is inclined in the direction substantially along the airflow.~~